

DOCUMENT RESUME

ED 244 520

FL 014 368

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 TITLE Teaching Creative Thinking Skills to Foreign Adults to Facilitate Their Adaptation to the U.S.
 PUB DATE Mar 84
 NOTE 19p.; Paper presented at the Annual Meeting of the Teachers of English to Speakers of Other Languages (18th, Houston, TX, March 6-11, 1984).
 PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052)
 -- Speeches/Conference Papers (150)
 EDRS PRICE MF01/PC01 Plus Postage.
 DESCRIPTORS *Acculturation; *Adjustment (to Environment); Adults; Class Activities; *Classroom Techniques; *Creative Thinking; Daily Living Skills; Decision Making; Diaries; *Foreign Students; *Problem Solving; Skill Development

ABSTRACT

Creative thinking and problem-solving, skills related to people's flexibility, tolerance of ambiguity, curiosity, and risk-taking ability, are especially useful for foreign adults currently living in the United States. These skills are crucial in adapting to a new culture and in making decisions in a society based heavily on individual choice. The objectives of teachers of foreign students should be (1) to assure the students that their past experience is valid in a new culture, or (2) if it is not valid, to teach them to recombine it in new ways so it can become valid. Class exercises to develop creative thinking skills include: (1) warm-up exercises such as exercises in multiple uses of items, for which students are graded according to fluency, flexibility, and originality; (2) journal keeping, which is left uncorrected; (3) exercises in transforming information, such as interpreting tables and graphs or diagramming prose writing; and problem-solving in groups, involving brainstorming, research, and decision-making. The orientation or English class is an appropriate environment for these exercises. (MSE)

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Teaching creative thinking skills to foreign adults
to facilitate their adaptation to the U.S.

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Studies show that creative thinking and problem-solving is related to people's flexibility, tolerance of ambiguity, curiosity, and ability to take risks and think divergently. Everyone's creative thinking skills, defined by Parnes et al (1976) as the recombination of experience into new thoughts, can be improved. These skills are especially useful for foreign adults currently living in the U.S. because the above traits are crucial to adapting to a new culture and to making decisions in a society based so heavily on individual choice. As teachers, our objective should be two-fold: 1) to assure students that their past experience is valid in a new culture, and 2) if it is not valid, to teach them to recombine it in new ways so that it can become valid. Class exercises to develop creative thinking include multiple uses and forced relationships brainstorming, journal writing, information transformation and problem solving.

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One of the services frequently offered to foreign students by international offices or English classes of universities is an orientation to American society. Recognizing that these newly-arrived students need some help in adjusting, counselors, orientation planners or English teachers arrange field trips, invite guest speakers, present demographic information and advise students on social norms. Granted, these activities often expose them to aspects of life not found on college campuses, but they are too narrow, too passive in intent. These activities appeal to the cognitive needs of the students, but they do not seem to address their emotional needs. The majority of these students--intelligent, successful, and socially competent in their native surroundings--are suddenly thrust into a stage of child misunderstanding, inexperience and perhaps, inability to communicate. They suffer from varying degrees of culture shock, insecurity and stress. A good orientation program or English class would also recognize their affective needs and seek to address these needs as well, in order to help students adapt.

Why students need creative thinking skills

One way to address both the emotional and cognitive needs of foreign students is to teach them creative thinking, problem solving and decision-making skills. In this way, the counselor or English teacher not only provides mechanisms useful in learning to cope in a new society, but also relevant, purposeful

motivation for seeking out information about that society. Creative thinking may be defined as the "ability to stimulate and recombine one's knowledge and experience so that new thoughts or products result" (Parnes, Noller and Biondi 1976). In other words, each person has the prerequisite for this kind of thinking--world knowledge and past experience. The task is to learn to reassociate the various parts of one's repertoire to successfully solve problems and fulfill needs (Romanluk 1982). There are many reasons why exercises in creativity would be beneficial to newly-arrived foreign students. They are:

0 Creativity is related to flexibility, tolerance of ambiguity, risk-taking and curiosity, all factors necessary for learning and growth (Torrance 1962). Such factors are also necessary to establish some degree of peace of mind in the early months of living in a new culture when the student is very unsure of what to do or say.

Psychologists have sought to define and research creativity by studying the personality traits of divergent thinkers, hoping to find some common elements. Numerous traits have been isolated; Torrance, a noted creativity researcher, found 84 different characteristics identified by at least one study as differentiating creative persons from less creative ones. He reports a

large number of significant correlations between the

non-aptitude traits and the measures of ideational fluency [that is, the sheer quantity of ideas produced] and originality. Ideational fluency appears to be related to impulsiveness, self-confidence, ascendance, greater appreciation of originality, and inclination away from neuroticism. Those having higher originality scores tend to be more interested in aesthetic expression, in meditative or reflective thinking, and appear to be more tolerant of ambiguity and to feel less need for discipline and orderliness (1962).

0 Creativity is related to the ability to make innovative, untraditional choices.¹ Exercises in this kind of thinking teach students to generate and evaluate alternative solutions to

¹The creative thinking process is measured by three criteria--fluency, flexibility and originality. Fluency is measured by sheer quantity; flexibility by the ability to shift into different categories and types of responses; and originality by a combined subjective and objective assessment of the cleverness and statistical rarity of the response. There are several creativity tests, including the most popular, a battery of tests based on the theory of Guilford and extensively described in Torrance (1962).

problems. Some students come from backgrounds where rigid rules dictate social custom. Because they are not experienced in making decisions for themselves, they are lost here in America, away from these rules. This feeling of floundering was true of several Malaysian boys I taught one summer. They had just graduated from boarding high schools where a ringing bell signalled their progress through a daily routine. Here in the U.S. they were living unsupervised in apartments, having a difficult time adjusting to their new responsibilities. Free to set their own out-of-school schedules, for example, they mismanaged their time, watched television instead of studying and ended up on academic probation. They needed help in learning to decide how best to structure their days.

Similarly, my Arab students have on several occasions said that the U.S. allows its citizens too much freedom. They said that ~~s-ue~~ when some Arabs come here, they are overwhelmed by all the choices they have and are unable to cope without strict socio-religious rules to help them make decisions. As a result, they make poor--and in one case fatal--decisions about studying, drinking, and taking drugs.

In the same mode of conventionalism are the high achievers who have pleased their teachers because they think like the status quo. As Torrance (1964) suggests, teachers reward students who conform to the teachers' models, so that while suc-

cessful students are often intelligent, they may not necessarily be creative. Anderson (1960) reports that above 120 IQ, there is little correlation between intelligence and creativity. Exercises in creative thinking would round out these achievers' cognitive styles. Many foreign students are on scholarship and are often highly intelligent products of rigid school systems. They may indeed benefit from exercises to expand their approach to studying. A colleague of mine related an incident she had with a Thai woman which is a good example. My friend was teaching her classes to write research papers, but her Thai student was incapable of formulating a thesis and evaluating and collating information from various sources to argue for her thesis. Nor did she understand that plagiarism results from using material verbatim without crediting the author. The woman, like all good Thai students, believed that the words she read were words of the masters, and that as a mere student, she had no right to change a single one. Clearly she needed to expand her notion of scholarship to adapt to American beliefs.

0 Creativity is related to divergent thinking, which studies have shown declines with age (Alpaugh, Parham, Dole and Birren 1982). In this case, our target group's handicap is not their alien status but their adult age. These exercises can help to delay the onset of more convergent thinking.

Alpaugh and her colleagues noted age differences in divergent thinking and creative motivation. As age increases, they

say, creativity decreases. There is a smaller quantity of appropriate and original ideas produced; however, this decline is not due to a decline in intelligence with age as some believe, but a decrease in divergent thinking abilities (Alpaugh et al 1982; Alpaugh and Birren 1977; and Alpaugh, Renner and Birren 1976). A recent study by Alpaugh et al (1982) concludes that older women depend more on crystallized intelligence (that is, factual world knowledge) to complement ~~the~~ their slowing down of cognitive behavior due to age while the younger women relied more on divergent thinking. They had studied the creative writing of 61 women, ranging in age from 20 to 83. The researchers hypothesized that the decrease in divergency may be due to cognitive load-shedding, a concept first put forth by Birren (1964). Birren maintains that this decrease in reference for complexity and slight slowing of the information processing functions limit the fluency of ideas and number of unique associations, the criteria for measuring creativity.

Birren's theory for the decline in divergent thinking replaces a 25-year-old explanation by Lehman. Lehman (1956) emphasized it was not age itself that led to a decline in creativity, but certain factors that accompany age. Some of these factors include: loss of physical and mental energy, loss of sensual acuity, environmental distractions (i.e. familial and job responsibilities), debilitating chemical dependency, an increase in physical and mental illness and positive or negative

feedback that leads to either stagnating contentment or to discouraging apathy.

O Creativity is related to a positive attitude and a belief in the future, if I may extrapolate from a survey Torrance (1978) sent to almost 2000 gifted elementary and high school students in the mid-1970s. Seventy-three percent of the elementary and 97 percent of the high school respondents said they believed they could influence the future. Torrance implies that faith and optimism in the future lead to more creative ways to shape it. He quoted from The Images of the Future (Polak 1973) in saying that positive future outlooks lead to progress while negative ones lead to decay. Polak says the holders of the images of the future that change and improve the world come from a creative minority. Because foreign students educated outside their countries become planners and decision-makers once they return, American educators would do well to develop in them creative problem-solving skills.

Both Torrance (1978) and McLeish (1976) believe that anyone can be creative and productive throughout life. They say that because creativity comes from within, from an effort to stimulate and recombine personal knowledge and worldly experience into some unique or exceptional form, everyone can learn to think creatively.

What a creative thinking orientation program should include

Based on this research then, we can conclude that in teaching creative thinking skills as a way of helping students adapt, we have a two-fold purpose: 1) to assure them that in many cases their past experience is valid (for example, people the world over have similar physical and emotional needs), and 2) if that past experience is not valid as it is, it can be recombined in unique ways to become valid (Students from former British colonies are not used to driving on the right side of the road, but they can apply their experience in driving to learning to drive as we Americans do.)

Donald Treffinger, Scott Isaksen and Roger Firestein (1983) developed a hierarchy of cognitive and affective values that they believe make up a creative learning situation. At the lowest level are fluency, flexibility and originality, the traits measured in tests of creativity, as well as curiosity, openness to experience, risk-taking, and self-confidence, the traits Torrance found among creative individuals. At higher levels are the cognitive skills of researching, evaluation, analysis, synthesis, application and transformation, analogy and self-direction; and the affective traits of awareness development, fantasy, imagery, psychological safety in creating and relaxation and growth.

With a similar concept in mind, Romanuik (1982) designed a creative thinking workshop centered around the teaching and

practice of problem-solving. She emphasizes not only the learning of new adaptive skills, but also the fostering of a self-confident, risk-taking attitude, as Treffinger et al suggest. Convinced that everyone has a rich background of experience and creative potential, she tries to build an environment that facilitated self-esteem, curiosity, perserverance to task and deference of judgment of task so as not to reject an idea too soon. She also teaches such thinking strategies as brainstorming, checklisting and forced relationships (that is, finding similarities between dissimilar objects). Romanuik's workshops are flexible enough in design and description to be used with most groups of adults. Individual teachers tailor the exercises to fit the personalities of students in specific classes--an orientation class or an English class of newly-arrived foreign students, for example. It is just such a class that I taught.

In spring 1984, I had 31 students in two first-semester ESL freshman composition classes. All but three were first-semester freshmen. Because most of the students had an excellent command of the conventions of English writing, we did not concentrate on grammar and composition but instead concentrated on creative thinking skills. Here are some activities that I had my students do in class:

0 Warm-up exercises in creative thinking, such as the multiple use tests or the strategies Romanuik uses. Almost once

a week I gave my students a ten-minute exercise asking them to list as many uses for tin cans, boxes, pieces of paper or cloth as they could. In addition, they had to brainstorm such problems as what excuse they could give for handing their English paper in late, how to rescue two communications satellites in the wrong orbit or what they should look for in selecting a university for their children. In a forced relationship exercise, they were asked to come up with as many similarities between a book and a bowl and a book and a clock as they could. In all these exercises, the students were asked to merely list their answers without worrying about formulating complete sentences and correct grammatical phrases.

In evaluating the exercises I gave three scores: fluency, flexibility and originality. Fluency was measured by merely counting up the number of ideas listed. Ten ideas on a page translated into a score of 10. Next I looked at their flexibility by evaluating how different the ideas were from one another. For example, in listing all the uses for a piece of cloth, the student who said, "for making pants, shirts, dresses, clothes," got a fluency score of 4 but a flexibility score of only 1 while the student who said "for making clothes and covering the furniture when painting" got a fluency score of 2 and a flexibility score of 2. Finally I calculated the originality by counting the number of students who listed each of the ideas present. If, for example, 92 percent of the students mentioned an idea, it was very common, and in this sense, unoriginal. If only one person

mentioned it, it was very original. Point values for originality were assigned to each idea and each student's total was added up. In these exercises culture-specific answers, such as using tin cans to scare the birds away from rice padi fields or using a piece of cloth as a Muslim woman's headdress, ranked as highly creative. So did answers that came from their majors, such as one similarity between a book and a bowl is that they are both made up of elements. Students were not graded on these exercises but were asked to make it their personal goal to continually improve. They were rewarded for answers drawn from their past, native culture, experiences.

0 Journal keeping exercises. My students were expected to write at least two sides of a page in a journal each week. I did not correct their grammar, spelling, punctuation or vocabulary. I merely recorded the number of pages and responded to what they had written on a personal level. I did not want them to feel they were censored in any way (although on occasion I did clarify a gross misconception) since this exercise was meant to give them an expressive outlet. I emphasized that they could say anything they wanted to and tried very hard in class to let them know they did not have to be afraid to be honest in what they wrote. I often read about their loneliness, their frustration with the language and culture, their excitement in seeing snow for the first time and their attitudes toward Americans. For example it happened that in class we talked a lot about the racial attitudes

at the University of Alabama because many times White students responded to my dark-skinned foreign students the same way they would respond to Blacks. In talking and writing about this problem, my students said they better understand White American feelings and can now better deal with the frustration of unfriendly neighbors and classmates. Generally they have a wealth of experience to write about, but some students felt more comfortable if they had a topic to help them get started. The topic usually involved something we had talked about in class. Many found it easier to write in their journals if they wrote their entries as letters. Although I did not correct their grammar, they still benefited from the exercise linguistically because daily composing improved their fluency, trained their minds to seek out experiences to record (the awareness development Trefinger et al 1983 mentions) and documented their growth through this traumatic time. Unlike some of the other exercises given here, even beginning and illiterate students can keep journals. For them, entries can either be dictated or taped. In addition, the journal makes a wonderful souvenir of their time in the U.S.

0 Exercises in transforming information. In other words, I often asked my students to interpret in paragraph form tables and graphs or to reorganize information in prose into diagramatic forms. These exercises in transformation forced them to comprehend the information but conceptualize it in new ways. The exercises also forced the students to be more flexible in their

thinking about how to best express themselves. An ability to organize information diagrammatically is especially important for my engineering and business students, who in their future careers, will be writing feasibility and marketing reports. Even without this flexibility component, learning to write about graphs is a practical matter for freshman students in chemistry, biology and physics labs. These exercises corresponded to whatever topic the students were writing about in their weekly or bi-weekly graded essays and came from authentic sources, such as newspapers or magazines.

0 Exercises in problem-solving and group work. The final major component of the course was problems students had to solve. They were required to work in groups to research and evaluate information and to write about it. They combined library research with interviews and field trips. The problems were designed to be meaningful, to help them discover aspects of American life and to learn problem-solving techniques. For example, each of my students had to research his or her department to find out such information as course requirements, available scholarships and work opportunities, and available campus services and costs, in an attempt to get the students to know their new university better. They began with a brainstorming session with the whole class and then more brainstorming in small groups. Finally they divided the workload and went out after the information. In writing the description of their department,

they were encouraged to use tables and graphs. Many students felt this assignment was useful because it better acquainted them with their department and their requirements for graduating, two things freshmen usually do not know. They also explored the city to find the answers to such questions as how to get a driver's license, to report a car accident, to marry an American, and to find an apartment and hook up utilities, all topics they indicated in their journals that they needed or would like to know. The beauty of these exercises is that they blend nicely with the field trips and guest speakers traditional ori-

entation and English classes have. We usually take our students to government buildings (state capitols, if they are nearby, but city halls at least) and possibly arrange to meet with a government official. Why not make it a fact-finding mission? The excursion becomes much more meaningful when the students are personally involved. In this approach, counselors and teachers can also make better use of current events of interest. For example, a few years ago, the Texas legislature debated a bill that would require foreign students to pay substantially higher student service fees than American students. In a problem-oriented class, students could lobby against the bill, learn persuasion skills and discover the American political process first-hand. Their personal involvement would make the lesson in how American laws are created much more meaningful.

In conclusion, a class of diverse citizenry would provide an extraordinarily rich collective mind. The different cultural points of view stimulate class members to think in ways they never have before. This ability to think creatively helps foreign students to adapt to American life, to improve their scholarship and research and to better lead their communities and countries at home. In helping them adapt, we want to show them that the experiences they bring with them from home are still valid or can be uniquely recombined to become valid. We can help them see the familiar in American culture or at least help them better tolerate the unfamiliar in the first few months they are here. We can guide their experiences and learning but move them more and more toward self-direction. The orientation class or the English class of American universities is the most appropriate means for teaching creative thinking, problem-solving and decision-making skills.

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